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How Urban Youth Perceive Relationships among School Environments, Social Networks, Self-Concept, and Substance Use

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Abstract

Objective—Studies suggest adolescent substance use aligns with academic and behavioral self-concept (whether teens think of themselves as good or bad students and as rule followers or rule breakers) as well as peer and adult social networks. Schools are an important context in which self-concept and social networks develop, but it remains unclear how school environments might be leveraged to promote healthy development and prevent substance use. We sought to describe how youth perceive the relationships among school environments, adolescent self-concept, social networks, and substance use.

Methods—Semi-structured interviews with 32 low-income minority youth (ages 17-22) who participated in a prior study, explored self-concept development, school environments, social networks, and substance use decisions. Recruitment was stratified by whether, during high school, they had healthy or unhealthy self-concept profiles and had engaged in or abstained from substance use.

Results—Youth described feeling labeled by peers and teachers and how these labels became incorporated into their self-concept. Teachers who made students feel noticed (e.g., by learning

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students' names) and had high academic expectations reinforced healthy self-concepts. Academic tracking, extra-curricular activities, and school norms determined potential friendship networks, grouping students either with well-behaving or misbehaving peers. Youth described peer groups, combined with their self-concept, shaping their substance use decisions. Affirming healthy aspects of their self-concept at key risk behavior decision points helped youth avoid substance use in the face of peer pressure.

Conclusions—Youth narratives suggest school environments shape adolescent self-concept and adult and peer social networks, all of which impact substance use.

Keywords

Substance use; schools; social networks; qualitative research

INTRODUCTION

A growing body of evidence indicates that school environments, including its organizational structure, ethos, educational instruction, and behavioral instruction,[1-3] may have a strong influence on adolescent substance use.[1,2,4,5] However, the exact causal mechanisms through which schools might influence substance use remain unknown. Through near-daily exposure, school environments have the potential to shape adolescents' relationships with teachers and peers, social norms, self-concept, and educational attainment.[1] These factors are likely to be mutually reinforcing and are strongly associated with substance use.[6,7] However, developing interventions to reduce substance use by harnessing school environments requires a deeper understanding of the pathways through which school environments, social networks and self-concept might be related.

Social Influence Theory[8] suggests that adolescent substance use is closely tied to the behaviors and attitudes of individuals in their social network.[9-11] Schools have the potential to shape social connections with adults and peers, as well as social norms around problem behaviors.[12,13] Hence social networks represent one key mechanism through which school environments might impact substance use.[14] Further, as teens age, they develop and solidify their self-concept, or self-perceived competency in different domains,[15] based on their experiences and the input of people close to them.[16-18] Previous studies show that the self-concept domains of behavioral conduct and academic competence (whether teens think of themselves as rule followers or rule breakers and as good or bad students) are strongly associated with substance use and may be shaped through adolescents' experiences in school.[19-23] Complicating this area, interviews with teachers and adolescents in the United Kingdom suggest that schools may impact self-concept, in part, through exposure to risky peers.[24] Alternatively, cross-sectional evidence from the US suggests supportive relationships with school-related adults are associated with healthier self-concepts and lower rates of substance use.[25] Finally, it is possible that school-level factors are merely a marker for other contextual factors that drive substance use, such as family stress, parenting style, and exposure to violence and poverty.[26]

Understanding whether and how schools might play an active role in shaping adolescent substance use is critical to designing effective prevention strategies and helping clinicians

identify and support youth at high risk for substance use. However, few studies describe the processes through which school environments relate to substance use. Specifically, there is a paucity of qualitative studies describing how adolescents' experiences in US schools relate to their social network, and how that might influence students' academic and behavioral self-concept development and substance use decisions. Understanding how adolescents perceive school pathways towards substance use can elucidate targets for prevention and describe potential health impacts of school-related policies and practices. This may be particularly important for low-income minority youth, who are at increased risk for poor academic and health outcomes, including substance use, and whose perspectives are critical to include in the scientific discourse regarding health promotion. Hence, through the use of qualitative methods, we sought to describe how low-income minority youth perceive the relationships among school environments, social networks, self-concept, and substance use.

METHODS

We performed semi-structured interviews with 32 youth ages 17-22 (conducted from May 2014-April 2015) about their school environments, self-concept development, social networks, and substance use decisions. All youth had previously participated three years prior in the RISE study, a cross-sectional survey of 9th-12th grade students who had applied for admission to high-performing charter schools in low-income Los Angeles communities.[27] All procedures were approved by the institutional review board of the University of California Los Angeles.

Participants

Based on RISE survey responses, we recruited male and female participants who attended charter, public, or alternative schools to explore youth perspectives across a range of different school environments (see Table 1 for participant demographics). To explore the relationship between self-concept and substance use, we recruited participants who reported high and low behavioral self-concepts and engaging in and abstaining from substance use. The RISE survey measures included the frequency of 30-day alcohol use, marijuana use, and other drug use and the Harter Self-Perception Profile for Adolescents Behavioral Conduct Subscale. [28] This 5-item subscale (alpha=0.69) asks respondents to select from two opposing statements, the one describes them best and the degree to which it is "true" for them. For example, respondents indicate whether they are a teenager who usually does the right thing or one who often doesn't do what they know is right. Youth with behavioral self-concept scores at or above the 75th percentile (which corresponds to identifying as a rule-follower) were considered to have had high behavioral self-concept at the time they were attending high school. Conversely, those scoring at or below the 25th percentile (which corresponds to identifying as a rule-breaker) were categorized as having low behavioral self-concept. Those who reported using at least two substances in the previous 30-days were considered substance users at the time of high school while abstainers reported no substance use in the 30 days prior to the RISE survey. The majority of RISE participants had concordant self-concept and substance use profiles. Among participants with low behavioral self-concept 52.7% used alcohol, 38.9% used marijuana, and 35.3% used more than one substance in the prior 30 days, while 21.4% reported no lifetime substance use; among participants with high

behavioral self-concept 22.3% used alcohol, 7.8% used marijuana, and 5.2% used more than one substance in the prior 30 days, while 48.9% reported no lifetime substance use. To explore the relationships among school environments, social networks, self-concept, and substance across a range of experiences, four categories of youth were interviewed: substance users with high behavioral self-concept, substance users with low behavioral self-concept, non-users with high behavioral self-concept and non-users with low behavioral self-concept. Eighty potential participants were initially identified and interviews with participants from each of the four categories were completed until thematic saturation was achieved. Overall, we attempted to contact 56 participants, of whom 17 could not be reached and 7 declined participation, for an acceptance rate of 82%.

Interview Protocol

We developed the semi-structured interview guide based on the literature and pilot-testing with adolescents and young adults. The interview probed how youth developed their self-concept; how that process was shaped by their experiences in school and their social networks; what impacted youth decisions to engage in or abstain from substance use; and perceived leverage points for interventions to prevent substance use (for sample interview questions, please see the appendix). Most interviews were conducted in person in a private setting and lasted 90 minutes (range 60-120 minutes). Three interviews were conducted by phone-- two for participants who had moved out of the Los Angeles region and one due to participant preference. Informed consent/assent and, when applicable, parental consent was obtained prior to all interviews, all of which were conducted by R.D. and audio-recorded and transcribed for analysis.

Data Analysis

We used a 3-step coding process based on grounded theory. Three coders reviewed the transcripts to discuss initial themes and used consensus to develop and refine the codebook until a kappa >0.8 was achieved for all major codes. Interviews and iterative analyses continued until saturation of major themes was achieved. All analyses were conducted using ATLAS.ti software (ATLAS.ti Scientific Software Development GmbH, Berlin,Germany).

RESULTS

As seen in Figure 1, youth described how their school environments shaped their social networks by exposing them to peers and adults with whom they had the opportunity to form relationships. In addition, the feedback they received through their school-related social network, including social labels from peers and adults, shaped their self-concept. Self-concept and social networks were closely related, as youth described seeking social relationships to both inform and affirm their self-concepts. Together, both their self-concept and social networks combined to shape youth substance use decisions. These pathways were similar across genders, school environments, self-concepts and substance use profiles.

School Environments and Social Networks

School Size—Youth described how their school environment helped determine the universe of peers and adults with whom they had the potential to form relationships.

Paradoxically, although large schools might offer more opportunities to develop new friendships, youth felt a more powerful need to sort themselves into social groups in this environment, which actually reduced their exposure to diverse friendship groups. Small schools facilitated both adult and peer relationships. For example, one student described the impact of attending a small high school on her social network: "So it was the fact that the school is small assured that everybody knew each other—that everybody talked to each other. It was pretty much a good thing because that way not a lot of people were excluded."

College Preparatory Programs and Extracurricular Activities—In addition, academic tracking and extracurricular activities, such as participating in sports and school clubs, played an important role in sorting students into risky versus non-risky peer networks. Participating in college preparatory programs and extracurricular activities also increased exposure to supportive adults. As one participant described the impact of joining a college preparatory program at her large public school, "It's just like a different crowd of kids you know. They're not the type to say, 'hey let's go smoke, let's go drink, or let's go do something bad.' They're more like, 'hey let's go out to eat...let's go out to the park and talk about college or what our goals are.'...You had more support from the teachers and I think they saw you differently because they saw that you cared, and they wanted to help me out."

School Ethos—Some youth also described how their school ethos helped shape their social network and self-concept. For example, youth attending schools or school-based programs that emphasized citizenship or academic excellence described how these school values became integrated into their self-concept: "My academy was based off of the Mexican community and standing up [against] things that were wrong. I think the school made me feel proud about myself—stand up for others...That school made me care about others. It made me care about my education, it made me care about who I am, what am I going to do." Others described how the school ethos served to filter their social network, "There wasn't a lot of bad kids for me to find my home with in high school...[There] was definitely more bad influences for me to be around in middle school. In high school I just had to settle for the good kids."

Social Networks and Self-Concept

Teachers—All participants identified "teachers who care" as important adults who could reinforce both healthy academic and behavioral self-concept. "Teachers who care" were described as those who knew students by name, noticed when they did not attend class or when their academic performance changed, had high academic and behavioral expectations, and were invested in their students' education. Specific examples of how teachers invested in their students included preparing for class, answering questions when students were confused, and listening to and advising students facing school and life challenges. For example, when one participant was asked what helped shape her into the person she is today, she responded, "Teachers. They're always trying to push you to do better. They're always trying to lend out a hand if I'm having trouble with questions or something. They're always more than happy to help you out and that kind of helps me. It makes me feel better about myself." In contrast, "teachers who don't care" made students feel ignored, anonymous, and of little value. One participant described the impact of being exposed to this kind of school

environment: "But I know that sometimes like expectations, the ways teachers perceive students, is detrimental to their outcome....I've come to realize that students are pushed out of the education system—they don't drop out themselves. They're pushed out. And I find it so fascinating how a student at [my high school]—you can go there for four years without a teacher knowing your name, without a teacher remembering who you are." In addition to teachers, many youth described other school-related adults, such as coaches, counselors, and school administrators as sources of positive or negative messages regarding how youth are perceived and valued.

Labeling—Youth described how they felt quickly labeled by adults and peers in school and how these labels became integrated into their self-concept. Youth expressed frustration with this process and concern that it began very early in their lives and restricted their self-concept development. One participant described, "Sometimes you've always been perceived as a bad student, so inside you're going to internalize that. You're not going to want to try. I think a lot of it is that-- it happens when you're in middle school. It can even happen as far as elementary. 'That's a bad kid.'" Both youth who were labeled as "good" or "bad" kids expressed resentment for these labels and a desire to break free from them. Those participants who were able to change their self-concept despite being labeled expressed pride in that accomplishment.

Feedback Loops—Social networks and self-concept were noted to be closely linked by all participants. However, while some participants described an intentional process of building their social network around their self-concept, others described their self-concept developing in response to their social network. One participant described changing her social network to align with her desired self-concept: "My grades, they were kind of like going down...I was kind of more like an A and B student and I would just get C's, like straight C's and once in a while I would get a D and that's when I realized that I had to change. That that's just not me. I rather be a smart person... I just started hanging out with different people... I had to look for different friends." In contrast, another participant described how, on the second day of attending a new school, he decided that he would have to change his self-concept to fit in: "I had to act and adapt like a smart kid to be cool like everybody. Because over there (at my old high school), you would have to be acting up or doing drugs to be cool. Over here, it's either you do your school work to be cool or you would be the weird kid."

Self-Concept and Substance Use Decisions

Rebels Use Drugs—Self-concept and social networks combined to influence students' substance use decisions. Youth universally described how low behavioral self-concept or a "rebel" self-concept was associated with substance use. In fact, participants felt that substance use was a core component of being a "rebel"-- or rule-breaker. One participant explained, "Just the feelings of being—just a radical or an outcast or something. People like that—you learn early on through movies or through the media—people like that...they do drugs." Conversely, academic self-concept was more loosely associated with substance use. Some students abstained from alcohol and drug use because they felt it might threaten their

high academic self-concept, while for others, high academic self-concept was felt to be compatible with substance use: "I still drink, I still smoke, and I'm doing good in school."

Cognitive Dissonance—We specifically sought out participants who, at the time of their RISE survey, reported substance use behaviors that were inconsistent with their behavioral self-concept. The vast majority of participants described how the realization of this dissonance prompted them to change their behavior to match their desired self-concept. For some, this was achieved in part by intentionally changing their peer group, while for others, exposure to a new peer group or influential adult prompted them to reflect on their identity and substance use. One participant explained, "Yeah, your friends can peer pressure you, but you don't have to fall into it. I mean I was at that point once, and as I said, my coach made me realize who I really was—like pulled me out of it by making me choose either basketball or, you know, go out and smoke—be a pothead." Although we did not re-administer a formal self-concept assessment, by the time of their interviews, all participants expressed consistency between their current described self-concept and current substance use behaviors.

Doing *Me*—All participants felt that adolescents who lacked self-concept clarity would be more susceptible to peer influence. One participant explained, "Well if you're not sure of who you are, you'll be more susceptible to doing things, you'll follow." Additionally, many participants described how reflecting on their high behavioral self-concept helped them avoid using alcohol and drugs even in the face of peer pressure. For many youth, this idea that using substances "is not doing *me*" was seen as a personally and socially respected reason to abstain from risky health behaviors. "My friends, they were more into like the drinking and doing drugs and partying and stuff. But I don't know, I guess like, I just decided to just do *me* and not like fall into their steps."

DISCUSSION

These results suggest that school environments might play an important role in shaping adolescents' social networks and self-concept, which go on to impact their substance use decisions. Further, the specific pathways through which schools were perceived to influence these processes are modifiable. For example, by limiting school size, broadening exposure to college-preparatory programs, and increasing the availability of extra-curricular activities, schools might further support healthy adolescent development. Many of these same factors have been explored as strategies to promote academic achievement, though with mixed results.[29-33] Studies quantifying the potential health implications associated with these structural aspects of a school environment might clarify whether such education policies might also be considered public health policies. Additionally, schools might serve as important platforms for more focused substance use prevention interventions targeting social networks and self-concept. For example, we might explore whether using school classes and clubs to intentionally surround high risk students with low risk peers could be an effective prevention strategy.[34]

Although schools were described influencing adolescents' peer networks, the emphasis on key supportive adults, particularly teachers and coaches, was striking. Youth descriptions of

supportive school-related adults overlap considerably with the dimensions of both strictness and warmth associated with authoritative parenting. Studies link similar aspects of school climate to both academic performance and risky health behaviors such as fighting and substance use. [35,36] Given that adolescents spend nearly half their waking hours in school, authoritative school environments might offer an important source of structure and support to youth during this critical developmental period, and may have the potential to impact a broad range of risky health behaviors.

Youth criteria for "teachers who care" were surprisingly consistent and basic—including simply knowing students' names, preparing lesson plans, and having high academic expectations. In contrast, qualitative studies with middle-class youth described "teachers who care" as those who were more involved in students' personal lives or took extra effort to express academic or social support.[37,38] This may reflect socio-economic differences, with privileged youth being more universally exposed to schools that already communicate high expectations and make students feel acknowledged as individuals. Having a relationship with a caring adult has protective associations with a wide variety of health outcomes.[12,39] Hence, interventions to educate school-related adults and incentivize the specific behaviors that communicate "caring" to students might be explored as potential mechanisms for fostering such relationships.

Finally, our findings have important implications for clinicians and adolescent health advocates. Clinicians might consider exploring adolescent patients' academic and behavioral self-concepts and the degree to which high self-concepts are being supported in their schools. Our results indicate that youth who lack high academic and behavioral self-concepts may be particularly vulnerable to substance use. Future studies might test whether a lack of high self-concept (including a lack of self-concept clarity) should be considered a risk factor for substance use, how best to assess self-concept in the context of a clinical encounter, and whether it may be helpful to prompt substance using youth to reflect on any dissonance between their desired self-concept and their health behaviors. This type of active listening and reflection is a core component of motivational interviewing, which has been demonstrated to help facilitate healthy behavior change. The current SBIRT model for screening adolescents in the primary care setting is based on motivational interviewing, and it remains to be seen whether explicitly incorporating self-concept into these discussions might further enhance its effectiveness.

This study is limited by the use of largely retrospective qualitative data. While this allowed our participants to describe the full scope of their development throughout adolescence, it is possible that their memories did not accurately reflect reality. Additionally, because our study focused on the experiences of low-income, minority youth from a single urban area, our findings may not generalize to other socio-demographic or regional populations. Despite these limitations we feel this study suggests school environments are a potentially important platform for substance use prevention. By increasing opportunities for adolescents to develop supportive adult and peer relationships and facilitating healthy self-concept development, schools might play a critical role in preventing and reducing substance use for vulnerable youth. Additionally, given the close relationship youth described between their self-concept and their substance use decisions, clinicians might consider exploring self-

concept with their patients when framing discussion regarding risky behaviors and peer influence.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

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What's New: Qualitative interviews with low-income, minority youth suggest modifiable aspects of the school environment contribute to substance use through adolescents' adult and peer social networks and self-concept development. Results suggest the school environment itself might be targeted for substance use prevention.
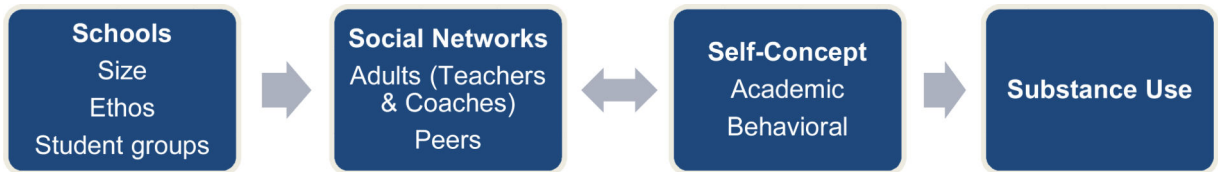
Figure 1. Perceived relationships among school environments, social networks, self-concept, and substance use

School size, ethos, and groupings within schools according to academic performance and extra-curricular activities (clubs, sports) impacted students' exposure to supportive adults and peers. Social networks influenced, and were reinforced by students' academic and behavioral self-concept. Social networks and self-concept then combined to influence adolescents' substance use decisions.

Table 1

Participant Demographics

	Number/Mean	Percent/Range
Age at Interview	20	17-22
Male	13	41%
Female	19	59%
Race/Ethnicity		
Latino	29	91%
Black	2	6%
Multi-ethnic/Multiracial	1	3%
School Type		
Charter	15	47%
Public	16	50%
Alternative	1	3%
High-Risk Self-Concept	15	47%
Low-Risk Self-Concept	17	53%
Substance Users	23	72%
Non-users	9	28%
Grade at RISE Survey		
9th grade	5	16%
10th grade	7	22%
11th grade	9	28%
12th grade	11	34%